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## *A FAILURE IN BRAIN SURGERY.*

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JAMES H., a rugged and robust young farmer; father of one child. About a year ago, while digging in the field, he was suddenly attacked with pain in the back of the head. At first supposing it to be merely an ordinary headache, he went to the house and bathed his head with cold water, but the pain continuing severe, he consulted a physician four miles distant, returned home, took the medicine as directed, and was considerably relieved of his suffering. The following day he did not feel strong enough to work, and sent for the physician, who diagnosed malarial fever. The attack lasted about six weeks, during which time he suffered more or less from pain in the head. Becoming dissatisfied with his medical attendant, he sought other advice, which confirmed the original diagnosis of malaria. He took many drugs, but experienced no marked relief from the pain. About four months after the beginning of the attack, he found that his eyesight was failing. He also suffered from nausea and his sleep was disturbed. He vomited a great deal, although the attacks of vomiting would not come on until some time after taking food, so that he did not lose flesh



rapidly. Pain in the frontal region continued persistently. He was then placed upon potassium iodide. This drug for a time seemed to make some impression on his sufferings, and under its influence he was able to secure a few hours' sleep. However, after a few days its effects passed entirely away, and the pain returned with renewed vigor and intensity. He became still more restless and sleepless, vomited more frequently, the symptoms finally culminating in an epileptic seizure. Following this attack of epilepsy, he had divergent squint and additional convulsions, with marked muscular weakness and some fever.

Drugs of every sort were tried in vain, the pain continuing.

Dr. Mere, at my request, made an ophthalmoscopic examination of the eyes and found the condition of the retina indicating pressure upon the optic tract.

*Operation.*—The man became blind or partially blind within a few weeks after the attack of headache. He had had almost no unilateral symptoms, and had but slight movements of rotation, and at times great muscular weakness. These facts led me to locate the disease in the neighborhood of the sella Turcica and in the cerebral ventricle. Therefore, I trephined the frontal bone just above the supra-orbital ridge on the right side. One button of bone was removed, and through the opening the membranes were incised. First, however, the dura mater was raised and a probe pushed along the orbital plate of the frontal bone in the direction of the optic commissure. Then the finger was intro-

duced and the parts carefully explored, but no tumor or abnormality being detected, a small director was pushed cautiously through the anterior lobe of the right cerebrum in the direction of the anterior horn of the right lateral ventricle. But little fluid was evacuated, owing to the brain substance choking up the instrument. No sensation as of the point of the director free in a cavity was observed. During the administration of the anæsthetic the patient nearly died from failure of respiration. His respiration resembled the Cheyne-Stokes respiration in that his breathing was at times very rapid and then slow. The opening was made at the position designated because the symptoms pointed to disease in the neighborhood of the optic commissure and crura cerebri, and to effusion into the ventricles. A brief recapitulation of the morbid phenomena presented by the case may serve to make clearer my reasons for operating. Pain, quite uniform in quantity and character; fever, of several weeks' duration, immediately after the attack of pain; impairment of sight in both eyes, varying at times in degree; nausea; movements of rotation quite indistinct in the history; general impairment of strength not unilateral. No incoördination; disturbance of sleep variable; copious nasal discharge and impairment of sense of smell. These led me to think that there was effusion into the ventricles, with disease near the optic commissure and crura cerebri which might be removed by an operation of the kind described. The operation was made in the amphitheatre of the Detroit Emergency Hospital in the presence of the students

of the Michigan College of Medicine. Thorough cleanliness was observed in every detail of the work, and the autopsy revealed no evidences of wound infection.

*Autopsy.*—Body moderately emaciated. Wound crescent-shaped on right forehead beginning near the external angle of the orbit, ranging upward and toward the median line of the face until the root of the scalp is reached, then descending to a point midway between the eyebrows. It was closed with nine interrupted sutures and had a plastic exudate between its surfaces.

The general appearance of the body suggested a man of moderately strong physique. His head was well shaped. On removing the calvarium the dura mater was adherent by numerous Pacchionian bodies which had in several places almost perforated the bone. A wound about three-fourths of an inch in length was found in the dura mater over the anterior lobe of the right hemisphere, which corresponded to a hole in the right frontal bone made by the crown of a trephine. Incising the dura and the attachment of the falx cerebri to the crista galli, they were turned back so that the arachnoid and pia mater were exposed. Much fluid was present in the subarachnoid space. There was some ecchymosis of the arachnoid and pia mater near where the dura mater had been divided at the time the bone was trephined. There were also present on the surface of the pia some particles of brain-tissue about the size of grains of wheat.

The membranes were entirely removed, and with



a sharp knife a section was made through the right cerebrum on a level with the corpus callosum. This opened the right cerebral ventricle and allowed several ounces of fluid to escape. The left ventricle was opened in the same way, and was found distended with fluid. The third ventricle was then opened by cutting through the corpus callosum and fornix, and was found distended with fluid. The *iter e tertio ad quartum ventriculum* was distended with fluid, so that it easily admitted a lead-pencil into the fourth ventricle. No other changes in the cerebrum were observed, except the shallowness of the spaces between the convolutions. The membranes were now removed and the cerebrum turned back to expose the optic commissure and the tentorium cerebelli, which was divided so that the crura cerebri, pons Varolii, and medulla oblongata could be easily examined. Nothing abnormal was noticed, except the excess of cerebro-spinal fluid. The optic nerves and commissure were normal. The spinal cord was divided after cutting the cranial nerves, and the entire brain was turned out of the skull. The cerebellum, pons, and medulla appeared normal at first, but looking more carefully at the cerebellum that organ was found to differ markedly in the appearance of its right and left hemispheres. The left hemisphere had a swollen appearance and a peculiar elastic feel which did not exist in the right hemisphere. A cut was made into it to demonstrate the arbor vitæ. when about an ounce of fluid ran out. Separating the cut surfaces, a cavity was found to have been divided which

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measured one-half inch in one diameter and one inch in another. Within this cavity, which was walled entirely with medullary matter, not a point or streak of gray showing at any point, a tumor oval in shape was found. It was about three-fourths of an inch in its long diameter, and was attached to one side of the cavity by a thick, short pedicle.



